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The Treatment of Pneumonia by Tepid Baths.

A paper read at the 39th Annual Meeting, of the Illinois State Medical Society. Reprinted from New York Medical Record, Sept. 7. 1889,

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DURING the past few years much has been written about the alarming mortality of pneumonia. Men whose wide experience has extended over a long period of years affirm that the death-rate is much higher under the present accepted modes of treatment than it was forty years ago, when the pathology of the disease was almost unknown. It would hardly seem that our therapeutics of pneumonia is commensurate with our knowledge of its etiology and pathology. Some endeavor to explain this increased death-rate by supposing that a change in the character of the disease has occurred in the last half-century, while others claim that the statistics are made more unfavorable by the fact that a larger number of poorly nourished and dissipated persons are now treated in the large city hospitals where these comparisons have been made. Whatever may be the explanation, it remains true that the mortality-rate is extremely, and I believe unnecessarily, high. The high mortality-rate of pneumonia and typhoid fever in America is the medical opprobrium of our country. Dr. Osler says death in this disease is most frequently due to high temperature and heart failure, and it is against these very grave symptoms that our

present treatment is least effective. The same statement might be made, and with equal truth, concerning typhoid fever. The newer antipyretics antipyrin and antifebrin have their place, and if used with proper precautions may render material assistance; but, used in a routine and indiscriminate manner, they are capable of doing more harm than good. They may enable us to reduce the height of the temperature, but are not lessening to any great extent the mortality of this disease. Too frequently they depress the heart's action and disturb the stomach, and thus cause complications of the gravest nature by preventing the patients' taking a sufficient quantity of nourishment, and by impeding the circulation of blood through the lungs. After careful consideration, and influenced by the successful use of the ice-coil in my practice, in the treatment of typhoid and puerperal fever, I came to the conclusion some time since that a change in my method of treating pneumonia was desirable. Relying upon the statements of well-known German authorities, I decided to make a fair and impartial trial of tepid baths in grave cases. The employment of these means is so contrary to all our American teachings and traditions that it is only in the last six months that I have gained sufficient courage to employ them. So great is the fear of cold in the minds of both the laity and the profession that it is doubtful whether I would have been permitted to make the experiment earlier in my professional career. For this reason the number of cases which I am able to relate in support of my views is not as great as would be desirable. However, I believe that a careful clinical study of a few cases is quite as valuable in proving principles as tables embracing an indefinite number can be. Modern investigation has certainly proven that micro-organisms of some kind, and not colds, are the immediate cause of this disease, and in the light of this discovery all mistaken prejudice against baths and cold applications must fall to the ground. Pneumonia is essentially a fever, which should be treated, as far as its effects on the respiration, temperature, heart, and skin are concerned, like any other fever. I do not pretend to say that every case of pneumonia should be treated by baths. Struempell wisely says it is disadvantageous, if not injurious, to give a patient baths if the disease is progressing favorably, for almost every bath has some disagreeable features which should be avoided if possible. All these disagreeable features vanish in a bad case. The possibility of the necessity for

baths should be had in mind on assuming charge of every case of pneumonia, and arrangements made accordingly. A portable bath-tub should be in storage from which it can be taken at a moment's notice. The dealer of whom I procure the tubs rents them out at a reasonable figure, and is easy of access day and night. A portable tub can be placed by the bedside and the patient lowered into it without the least physical exertion on his part. The patient should be placed on a single bedstead, with low head- and foot-pieces, for convenience in handling; sponges and towels dry sheets and blankets should be on hand in abundance for use during and after the bath. After the tub is once properly filled very little more disturbance is necessary, since the water will retain its heat for a long time and one or two buckets of hot water will bring it to the required temperature. The reasons for resorting to the treatment should be fully explained to the relatives, and their hearty co-operation secured. I have thus far found little opposition where this treatment was proposed, and this was usually volunteered by some officious neighbor whose medical attendant "never did such a thing." The physician himself must superintend and assist in giving the baths. Especially is this the case in children, whose expressions of fear will often influence the parents to the detriment of the treatment.

I have used baths in the treatment of six cases. All have not been successful, but in none were any bad symptoms caused by the bath; on the contrary, in every case the patient came out of the tub refreshed and improved, for the time at least. The first case treated was Mrs. F. W. T——, aged thirty-five, seen with Dr Dresser in the second week of puerperal fever, and with strength reduced by that disease. She developed at this time catarrhal pneumonia of the right lung, beginning with a severe chill, pain in the side, and elevation of temperature, pulse, and respiration. She was treated with antipyretics, stimulants, and expectorants for six days, without very apparent benefit. Matters had seemingly reached a critical point. The pulse and temperature remained elevated, and little or no material was raised from the lung. There was coma vigil, muttering delirium, and picking at the bedclothes. I finally urged, as a last resort, the employment of a bath, to which my colleague finally consented. To give it we were obliged to carry the patient to another room and immerse her in a stationary tub, which was only accessible from

one side. This increased the labor of the treatment a great deal, and minimized its benefits. The temperature of the baths was 98° F.; temperature of the patient, 103° F. The bath was given at 9 P.M., and, the condition of the patient being alarming, I remained all night an anxious watcher at her bedside. My concern may be better imagined than described. I had, with many mental misgivings, urged a procedure which, until then, I believe I may say, was unknown in the community, and severe condemnation certainly awaited its failure. During the night some encouraging symptoms appeared. She was bathed twice the next day, each time with some slight benefit, but it was not until a somewhat more prolonged bath was given on the following morning, that the rusty-colored sputa began to come away in any quantity. Four baths in all were given. As showing the condition of the patient and the value of baths, I may relate that her husband, an unusually well-posted clergyman, had cabled the patient's sister in London the news of her impending death. The patient has fully recovered, a result which I think would scarcely have been possible without the baths. One interesting feature of this case is the comparatively low range of the temperature. It never went above 103.5° F. The fever was not entirely controlled by the baths, as it went to as high a point after we had discontinued them as before; but their effect in loosening the exudation and stimulating expectoration and the heart's action was so marked as to be beyond question.

The second instance in which the baths were employed was in the case of W. K——, aged twenty-three, seen with Dr. Walter Ryan, in the fifth day of the disease. The temperature was nearly 105° F.; respirations, 64; and pulse, 144. While on a drunken spree he had been stricken with a severe type of the disease, and had been treated with antipyretics and stimulants *secundum artem* by Dr. Ryan. It was our opinion that death was inevitable in a few hours, but, influenced by the brilliant success in my first case, it was decided to give him the benefit of the baths. They failed to rescue him, but not only did they do no harm, but, we believe, sustained life thirty hours longer than would have been possible without them.

The next case to which I successfully applied the treatment by baths was Willie G——, aged ten. On the third day of an attack of measles he developed pneumonia, and it was only then that I was called to attend him. I found his respirations 84 per minute,

pulse above 160, blueness of the lips, and temperature 104.8° F. I lost no time, after informing the family of the gravity of the case, in preparing to give him a bath. In default of a regular bath-tub, and as I deemed an immediate bath imperative, we made use of a large-sized wash-tub in which the boy seated himself, while myself and assistants poured the water over him. He came out of the tub improved. Six hours later, finding alarming symptoms again present, I put him in a second bath. This completed the good effects of the first and started him on the highway to recovery. Eighteen hours after the first bath his respirations were 40; pulse, 126; and temperature, 102° F. Rapid convalescence followed.

The fourth case is that of Mr. W. S——, aged twenty-five, whom I was called to see at a coal-mining station ten miles from the city. Finding pneumonia of the right lung imminent, he was brought to the city by special train and placed in St. John's Hospital, where he soon developed the disease in its most severe type. The temperature reached the unusual figure of 106.2° F., and this despite the employment of antipyretics and the ice-coil. When it reached the highest point the unconscious patient was placed in a bath at a temperature of 95° F., where he was kept for ten minutes. This procedure was repeated in four hours. These two baths were sufficient to break the force of the disease, and steady and rapid improvement was noted from the time of their use. Expectoration, which had ceased with the appearance of the bad symptoms, became again abundant, consciousness was regained, and the heart's action improved. This patient weighed two hundred and eighteen pounds, but the labor of handling him was much less than was anticipated. The small number of baths required was the more remarkable because of his development of adipose.

The fifth case is that of M. J——, aged seven, whom I saw early in the disease, when there was probably little more than congestion present. The symptoms of pain in the side, distressing cough, and elevation of temperature and pulse were great enough to call for active treatment. Instead of giving the usual antipyretics I gave two tepid baths, and was thus enabled to change this picture to one of quietude and freedom from pain, and a rapid convalescence.

The sixth case was that of L. D——, aged sixty-nine, in which, unfortunately, the bath treatment was not given until after

severe symptoms of heart-failure had developed. The effect of the bath was good for the time being, and although the patient did not recover, the bath had nothing whatever to do with the fatal result, which was due to heart-failure. My only regret is that the treatment was not instituted earlier in the case.

The results of my trial of this treatment, it will be seen, give a mortality rate of thirty-three per cent. This is not a very encouraging argument in its favor, but statistics in so small a number of cases should not be used in that way. As a result of my clinical study of the use of baths, I am prepared to indorse the statement of their good effects made by gentlemen high in authority and with a large experience in their employment. My two patients who died were already *in extremis*, and two of the cases of recovery were calculated to give as severe a test of the treatment as one is likely to encounter. The treatment means work on the part of the medical attendant, and he who prefers to write a prescription to using some physical exertion had better remain an advocate of antipyretic medication.

The conclusions I make in closing this very imperfect presentation of the benefits of baths in pneumonia are: 1. They should only be given in those cases which are not progressing favorably. 2. In severe cases nothing is calculated to give so much relief to all bad symptoms. They shorten the duration of the disease and of convalescence, and reduce the mortality. Liebermeister says it has been reduced in his hands from twenty-five to ten per cent. 3. Rules for selecting cases and administering baths cannot be rigidly given. The thermometer is not always the guide for their administration. Difficulty of respiration and lack of secretion should lead to their employment, regardless of the height of the mercury. 4. The temperature of the bath should be one hundred degrees or less, depending on the severity of the case and the condition of the patient. Baths of extremely low temperature I have not found necessary as yet, but should not hesitate to employ them if occasion should require. 5. Stimulants should be given just before entering and on coming out of the bath-tub. The patient should not exert himself in the least. 6. The physician should himself superintend and aid in giving the bath. This rule could only be broken by having trained nurses who are competent to meet the emergencies which might arise.